

REMARKS

In view of the following remarks, reconsideration and further examination are requested.

Claims 35 and 47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '982 in view of Spears and Gilchrist. Claims 41 and 52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '982 in view of Spears and Stralser. Claims 36, 42, 48 and 53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '982 in view of Spears and either Gilchrist or Stralser, and further in view of JP '782. Claims 37, 43, 49 and 54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '982 in view of Spears and either Gilchrist or Stralser, and further in view of SU '212. And, claims 38-40, 44-46, 50, 51, 55 and 56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '982 in view of Spears, Pitara et al. and either Gilchrist or Stralser, and further in view of Hess et al. These rejections are respectfully traversed for the following reasons.

In rejecting claims 35, 41, 47 and 52, the only independent claims, the Examiner relied upon a combination of JP '982 (So et al.) and Spears, along with either Gilchrist or Stralser. Specifically, the Examiner expressed that

So et al. teach... an electrolytic device for electrolyzing water with reducing substances...at high temperature and pressure...

Spears teaches...that the formation or growth of bubbles when a gas is dissolved in a liquid can be prevented by increasing the hydrostatic pressure on the liquid.

Therefore, it would have been obvious... to have increased the hydrostatic pressure as taught by Spears on the water of the treatment of So et al. such that any hydrogen and oxygen produced by the electrolysis reaction were dissolved into the water...

Accordingly, the Examiner apparently understands the inventive concept of the instant invention to reside in dissolving generated hydrogen and oxygen in water under high pressure.

However, the instant invention is not concerned with dissolving generated hydrogen and oxygen in water under high pressure, but, as expressed in final paragraph beginning on page 12 and the initial complete paragraph on page 13 of the Response filed July 14, 2003, the instant invention is concerned with inhibition or suppression of generation of hydrogen and oxygen during high-

temperature and high-pressure hydrothermal electrolysis. Thus, the instant invention is not concerned with treating hydrogen and oxygen after it has been generated, but is rather concerned with limiting any generation of oxygen and hydrogen.

To further emphasize the inventive contribution made by Applicants, provided herewith is an article authored by the inventors entitled "Wet Electrolytic Oxidation of Organic Pollutants In Wastewater Treatment". As is clear from Figure 2 of this article, and its description in section 3.1 on page 877, Applicants have discovered that at temperatures greater than 100°C, as required by each of the independent claims, during hydrothermal electrolysis generation of hydrogen and oxygen is suppressed. Please note that the findings discussed in this article are also supported in International Application PCT/JP98/03544, the disclosure of which is incorporated by reference into the instant application, as expressed on page 1 of the original specification. Also, please note that this International Application corresponds to U.S. Patent No. 6,348,143, presented herewith as part of an Information Disclosure Statement.

Accordingly, while Spears may teach one having ordinary skill in the art how to prevent formation of bubbles when hydrogen and oxygen are dissolved in water, Spears teaches nothing with regard to suppressing or inhibiting generation of hydrogen and oxygen under conditions of high pressure and high temperature. Thus, one having ordinary skill in the art would have gleaned nothing from Spears with regard to how a potentially explosive condition, that would result from a combination of JP '982 and either of Gilchrist and Stralser, could be avoided.

The remaining references also teach nothing with regard to suppressing or inhibiting generation of hydrogen and oxygen under conditions of high pressure and high temperature. Accordingly, claims 35, 41, 47 and 52 are allowable over any possible combination of the references relied upon by the Examiner. Thus, claims 35-56 are allowable.

Additionally, assuming *arguendo* that Spears was applicable to the instant invention, it is respectfully submitted that the Examiner's rationale for relying upon Spears is flawed such that claims 35-56 would remain allowable.

In this regard, as expressed by the Examiner, Spears is concerned with increasing hydrostatic pressure on a liquid in order to limit an amount of bubbles formed in the liquid resulting from gas dissolved therein. From this, the Examiner appears to conclude that the increased hydrostatic

pressure of Spears would result in a greater amount of generated hydrogen and oxygen being dissolved in the liquid. However, Spears does not disclose that increasing hydrostatic pressure on a liquid would increase the amount of a gas being dissolved in that liquid, and the Examiner has not provided an explanation as to why increased hydrostatic pressure would result in an increased amount of a gas being dissolved in a liquid. Thus, the most that one would have learned from Spears is that increased hydrostatic pressure on a liquid can reduce the amount of bubbles formed from a dissolved gas in that liquid, but Spears would not lead one to believe that such increased hydrostatic pressure would result in an increased amount of gas being dissolved in the liquid.

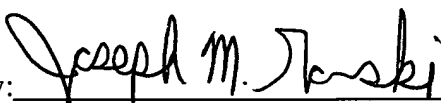
Accordingly, because the Examiner has not provided a basis for his conclusion that increased hydrostatic pressure on a liquid would result in an increased amount of gas being dissolved in that liquid, it is respectfully submitted that a prima facie case of obviousness would not have been established, even if Spears were applicable to Applicants' invention.

In view of the above remarks, it is respectfully submitted that the present application is in condition for allowance and an early Notice of Allowance is earnestly solicited.

If after reviewing this Response, the Examiner believes that any issues remain which must be resolved before the application can be passed to issue, the Examiner is invited to contact the Applicants' undersigned representative by telephone to resolve such issues.

Respectfully submitted,

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